



A Case of Mania Induced by Capecitabine-Based Chemotherapy

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Abstract

Capecitabine is a relatively new and first-line chemotherapeutic agent used for treating colorectal carcinomas. Despite its widespread use, there have been very few cases reporting its neuropsychiatric implications. Here we present a case of mania induced by capecitabine and oxaliplatin therapy in a middle-aged man without any prior psychiatric history.

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Introduction

For more than 40 years 5-fluorouracil has been the preferred chemotherapeutic drug for a variety of carcinomas. Capecitabine, a 5-fluorouracil prodrug, has just lately begun to be utilised in breast and gastrointestinal cancer due to its simple oral administration [1]. Neuropsychiatric side effects of 5-fluorouracil, notably cerebellar dysfunction have been well documented in the literature [2]. However, data on the neuropsychiatric side effects of capecitabine is sparse despite its widespread use. Capecitabine has been implicated in causing encephalopathy masquerading as psychosis [3] however cases of mania with capecitabine treatment are extremely rare and only 1 similar case has been reported previously [4].

Here we shall be presenting a case of a patient with colorectal carcinoma who developed secondary mania following the first cycle of chemotherapy with Capecitabine and oxaliplatin and the subsequent management of this adverse effect.

Case presentation

A 44-year-old man of lower socioeconomic status, belonging to a rural background and working as a clerk at a government enterprise was referred to the psychiatry department by the treating oncologist due to the emergence of new behavioural disturbance occurring 3 days after the first cycle of chemotherapy.

The patient had been under the care of an oncology team for stage 3 oral cavity squamous cell carcinoma for the past 2 months before the referral. He was planned for neoadjuvant chemotherapy followed by surgical resection of the tumour. However, after the first cycle of the chemotherapy with Capecitabine and oxaliplatin the patient began to exhibit abnormal behaviour 3 days after the first dose. The patient who for the initial 3 days post the chemotherapy cycle was bedridden and fatigued began to show bouts of irritability towards his family. Initially, he was verbally abusive towards his family members but gradually this irritability was exhibited towards strangers in



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his neighbourhood also. Over the next 2 weeks, his physical activity markedly increased and his sleep reduced with him pacing in the house throughout the day and doing chores at night. He became more talkative and had an elevated self-esteem and ideas of grandiosity where he made big claims of knowing powerful people in politics. The patient who was scheduled for the second cycle of chemotherapy was referred from the oncology department to the psychiatric department for the management of these symptoms.

Detailed evaluation ruled out any history of psychiatric illness in his past or any evidence of psychiatric disorder in his first-degree relatives. There was no history of any fluctuation in orientations, inability to recognize family members or sun downing. Substance history revealed Tobacco consumption in the chewable form in a dependence pattern for the past 20 years. General Physical examination revealed a mesomorphic-built man with blood pressure of 112/86 mm Hg. No abnormalities were found on systemic examination. On Mental status examination, the patient was conscious, alert, and oriented to time place, and person. His affect was euphoric, psychomotor activity was markedly increased as he constantly made gestures with his hands, and the speech was increased in rate, tone, volume, and productivity. Thinking elicited elevated self-esteem, flight of ideas, ideas of grandiosity, subjectively increased energy levels, and a decreased need for sleep. The YMRS score was 32 indicating a severe psychopathology.

Investigations

At the time of presentation, the patient had normal serum electrolyte levels with normal blood counts, liver function, kidney function, blood sugar, lipid profile and thyroid profile.

Diagnosis

Based on the history and MSE findings the patient was diagnosed with bipolar type 1 disorder, current episode manic, without psychotic symptoms as per the ICD-11 criteria.

Treatment

He was started on T. Olanzapine 10 mg HS and T. Lorazepam 2mg HS for sleep and was advised to continue the chemotherapy cycle and follow up in 2 weeks. His symptoms improved after starting olanzapine and did not worsen after the second round of chemotherapy.

Discussion

Cancer patients with newly diagnosed psychiatric disorders have a much higher mortality rate [5]. As a result, early detection and care of psychiatric symptoms are critical in lowering mortality and morbidity while also enhancing cancer patients' quality of life.

Many chemotherapeutic agents have been known to have significant adverse neurological and psychiatric sequelae. Capecitabine, a relatively newer agent used as a first-line treatment for Colorectal carcinoma [6] also shows the propensity to cause psychosis and mania in those treated with it. This case demonstrates that manic symptoms may occur following chemotherapy with capecitabine and underscores the possible therapeutic consequences for the long-term treatment of such presentations.

Chemotherapy regimens are frequently impractical to change or discontinue in real life. Hence, a rigorous risk-benefit review of all available alternatives, as well as consultation-liaison with other treating physicians handling medical, surgical, and psychological aspects of cancer should be aggressively pursued for such complex situations.

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